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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,725	11/19/2003	Kuang I. Kuo	59629-8013.US01	8691
22918	7590	11/04/2004	EXAMINER	
PERKINS COIE LLP P.O. BOX 2168 MENLO PARK, CA 94026			TANG, MINH NHUT	
			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/717,725

Applicant(s)

KUO ET AL.

Examiner

Minh N. Tang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the additive capacitor  $C_T$  (see Applicants' specification page 2). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. ***The form and legal phraseology often used in patent claims, such as "means", "comprising" and "said," should be avoided.*** The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The disclosure is objected to because of the following informalities:

a/ on page 1, line 6, "method In particular" should be -- method. In particular --.

b/ on page 7, line 27, "CPU 320" should be -- CPU 312 --.

c/ on page 8, "SW3, The input" (line 20), and "SW1" (line 22) should be -- SW3.

The input --, and -- SW3 --, respectively.

d/ on page 10, line 5, "steps 604 and 604. In step 606" should be -- steps 602 and 604. In step 706 --.

Appropriate correction is required.

5. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Claim Objections***

6. Claims 1, 12-13 and 15 are objected to because of the following informalities:

a/ in claim 1, "the testing results" (line 4), "the sense amplifier" (lines 6-7), "trans-impedance amplifier unit" (line 11), and "discharge circuit" (line 14) should be -- testing results --, -- a sense amplifier --, -- trans-impedance amplifier units --, and -- discharge circuits --, respectively.

b/ in claim 12, line 16, "the nest pixel" should be -- a next pixel --.

c/ in claim 13, lines 14-15, "the testing of the next pixel" should be -- testing of a next pixel --.

d/ in claim 15, line 2, " $V_s$ " should be --  $V_d$  --.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the limitations "the parasitic capacitance" (lines 8-9), "the source line" (line 9), "the thin film transistors" (line 9), "the charge current" (lines 9-10), "the pixel storage capacitor" (line 10) have not been recited previously; therefore these terms are indefinite. It is not clear what device is improved by a recitation "the improvement" (line 10). It is not understood what is meant by "every sense amplifier" (line 14) since only one sense amplifier has been recited previously. It is not clear "the amplifier" (two term in line 17) or "the operational amplifier" (line 18) referred to any one of "the sense amplifier", "a sense amplifier array", "trans-impedance amplifier unit", "a trans-impedance amplifier", or "an amplifier" recited previously. It is not clear "a switch" (lines 17 and 25) and "another switch" (lines 19 and 29) different from or the same as "two switches" recited previously. Should "two switches" (lines 15-16) be -- a first switch, a second switch --, and "two switches" (line 25) be -- a third switch, a fourth switch --? It is not clear what is meant by "the output" (line 21). It is not clear "said operation capacitor" (line 26) or "the operation capacitor" (lines 28-29) referred to "an operation capacitor"

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recited in line 16 or recited in lines 25-26. It is not clear "the amplifier" (lines 26 and 27) or "the operational amplifier" (line 28) or "said operational amplifier" (lines 31-32) referred to which amplifier recited previously. Finally, the limitation "said discharge circuit forms a discharge circuit for the parasitic capacitance" (lines 32-33) is a duplicated recitation.

In claims 5-7, all in lines 1-2, the limitation "said thin film transistor" (singular) has not been recited previously; therefore this term is indefinite.

In claim 8, line 1, it is not understood "said amplifier" referred to which amplifier recited previously.

In claim 9, line 1, it is not clear "said switches" referred to which switches recited previously (i.e., two switches recited in lines 15-16 and 25).

In claim 12, the limitations "the pixel storage capacitors" (line 3), "the nth column" (line 3), "the device under test" (lines 3-4), "the pixel transistors" (lines 4-5), "the short circuit switches" (line 6), "the sense amplifier" (line 6), "the discharge circuits" (line 7), "the short circuit switch" (line 10, singular), "the parasitic capacitance of the thin film transistor" (lines 10-11), "the transferring time" (lines 11-12), "the input switch of the sense amplifier" (line 13, singular), "the current" (line 14), "the pixel storage capacitor" (lines 14-15, singular) have not been recited previously; therefore these terms are indefinite. Is there any relationship between "the device under test" (lines 3-4) and the other elements such as the pixel transistors, the thin film transistor, etc. Furthermore, since the preamble recited "a testing method for invalid pixel of thin film transistor display array", therefore it is not understood "the device under test" represents. The

limitation "the transferring time is longer" (lines 11-12) is vague because it is not clear the transferring time is longer comparing to which time. It is not understood what is meant by "the result" (line 15), which device(s) having the output result.

In claim 13, the limitations "the pixel storage capacitors" (line 3), "the nth column" (line 3), "the device under test" (lines 3-4), "the pixel transistors" (lines 4-5), "the short circuit switches" (line 6), "the sense amplifiers" (line 6), "the discharge circuits" (line 7), "the input switch of the sense amplifier" (line 9, singular), "the current" (line 10), "the pixel storage capacitor" (lines 10-11, singular), "the integrated voltage" (line 11), "the short circuit switch" (line 13, singular), "the parasitic capacitance of the thin film transistor" (lines 13-14), "the transferring time" (line 15) have not been recited previously; therefore these terms are indefinite. Is there any relationship between "the device under test" (lines 3-4) and the other elements such as the pixel transistors, the thin film transistor, etc. Furthermore, since the preamble recited "a testing method for valid pixel of thin film transistor display array", therefore it is not understood "the device under test" represents. The limitation "the transferring time is shorter" (line 15) is vague because it is not clear the transferring time is shorter comparing to which time.

Claims 2-4, 10-11, and 14-15 are rejected since they depend on rejected base claims.

***Allowable Subject Matter***

9. Claims 1-15 would be allowable if rewritten or amended to overcome the objections and the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Tamukai	6,262,589	TFT Array Inspection Method And Device.
Jenkins et al.	5,561,381	Method For Testing A Partially Constructed Electronic Circuit.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh N. Tang whose telephone number is (571) 272-1971. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on (571) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh N. Tang  
Primary Examiner  
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10/26/04